



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,971	03/08/2007	Karsten Strehl	10191/4621	8542
26646 7590 04/01/2008 KENYON & KENYON LLP ONE BROADWAY NEW YORK, NY 10004				
EXAMINER				
LUU, CUONG V				
ART UNIT		PAPER NUMBER		
2128				
MAIL DATE		DELIVERY MODE		
04/01/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/578,971

**Applicant(s)**

STREHL, KARSTEN

**Examiner**

CUONG V. LUU

**Art Unit**

2128

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/11/2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/5508)
- Paper No(s)/Mail Date 1/4/08
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Inventor's Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

The Examiner would like to thank the Applicant for the well-presented response, which was useful in the examination. The Examiner appreciates the effort to perform a careful analysis and make appropriate amendments to the claims.

Claims 11-19 are pending. Claims 11-19 have been examined. Claims 11-19 have been rejected.

#### ***Response to Amendment***

1. The amendments to the drawings filed 12/11/2007 have been considered and accepted.
- 2.

#### ***Response to Arguments***

3. The objections of 12-16 are objected due to their dependence on canceled claims have been withdrawn in light of amendments.
4. The objections of Figures 1, 2a, and 6 have been withdrawn in light of amendments.
5. Applicant's arguments, see page 6, filed 12/11/2007, with respect to the 35 USC 101 rejections of claims 11-19 have been fully considered and are persuasive. The 35 USC 101 rejections of claims 11-19 have been withdrawn.
6. Applicant's arguments filed 12/11/2007, see pages 7-8, regarding claim 11 have been fully considered but they are not persuasive. The Applicant argues that the AIPA (Applicant's

Admitted Prior Art) does not teach a generic model animation interface or an in-model calibration interface, which use measurement and calibration technologies in a host-target architecture. The Examiner respectfully disagrees. The AAPA teaches a generic model animation interface or an in-model calibration interface, which use measurement and calibration technologies in a host-target architecture as recited on page 5 lines 13-34 and page 8 lines 4-11. In addition, the Applicant argues that the AAPA does not teach a standard measurement and calibration interface 76 on the target hardware, forming a link between the application software on the target hardware and the host. Applicant argues on unclaimed subject matter on merit. Claim 11 recites, "a generic model animation interface passing data from the target hardware to a modeling tool for animating a model of the control system". The Applicant further argues that the AAPA does not refer to an interface that interfaces between the host and target in a target hardware abstracted manner. The Examiner again respectfully disagrees. Applicant admits that this claimed feature is disclosed on page 6 lines 27-31 and Figure 6. In Figure 6, the AAPA teaches protocol handlers P1-P3 interfacing and passing data from the target processor to the modeling tool for animating a model of the control system. Claim 11, therefore, remains rejected.

7. Claims 12-16 are argued allowable due to depending on claim 11. Since claim 11 remains rejected as discussed above, claims 12-16 remain rejected.
8. Regarding claims 17-19, the Applicant argues that they are allowable for having subject matter analogous to that of claim 11. Since claim 11 remains rejected as discussed above, claims 17-19 remain rejected.

***Claim Objections***

9. Claim 17 is objected to because of the following informalities: there is an apparent typographical error in the word "implementing" on line 4 of the claim. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

**Claims 11-13 and 17-19 are rejected under 35 U.S.C. 102(a) as being anticipated by the Applicant's Admitted Prior Art, hereinafter the AAPA, of the instant application 10/578971.**

10. As per claim 11, the AAPA teaches a simulation system for computer-implemented simulation and verification of a control system under development, the control system comprising a target hardware and application software running on the target hardware, the simulation system comprising:

hardware implementing a generic model animation interface passing data from the target hardware to a modeling tool for animating a model of the control system (p. 6 lines 27-31 and Figure 6) and an in-model calibration interface passing data from the modeling tool to the application software, the model animation interface and the in-model calibration interface using measurement and calibration technologies in a host-target architecture (p. 5 lines 13-

34 and page 8 lines 4-11), to communicate with a measurement and calibration interface on the target hardware thereby forming a link between the application software on the target hardware and a host of the host-target architecture. (p. 2 lines 16-21, p. 5, lines 17-31, p. 7 lines 16-19 and p. 8 lines 4-14 figure 6 .

11. As per claim 12, the AAPA teaches the system according to claim 11, further comprising a target server adapted to connect the modeling tool with a target (p. 1 lines 23-27 and p. 6 lines 24-27. The host mentioned here is considered a target server adapted to connect the modeling tool with a target).
12. As per claim 13, the AAPA teaches the system according to claim 12, wherein the target server includes a protocol driver of a communication protocol adapted for communication with the target (p. 6 lines 24-31. The communication between the server and target is facilitated by at least one of communication protocols listed in these lines, and this teaching inherits a protocol driver of a communication protocol).
13. As per claim 17, these limitations have already been discussed in claim 11. They are, therefore, rejected for the same reasons.
14. As per claim 18, these limitations have already been discussed in claim 11. They are, therefore, rejected for the same reasons.
15. As per claim 19, claim 11 inherits these limitations. They are, therefore, rejected for the same reasons.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the AAPA as applied to claim 11, and further in view of Stewart et al (Design of Dynamically Reconfigurable Real-time Software Using Port-Based Objects, IEEE Transaction on Software Engineering, Vol. 23, No. 12, December 1997, pp. 759-776).**

16. As per claim 14, the AAPA teaches a plurality of simulation processes with corresponding memory and interface modules (p. 2 lines 16-21 and p. 3 lines 30-33),

but does not teach the modules including distinct memory locations adapted for inter-module communication.

Stewart teaches this feature (p. 767, col. 2 of this page, section 4.1 State Variable Communication, paragraphs 1-2 of the section and figure 7).

It would have been obvious to one of ordinary skill in the art to combine the teachings of the AAPA and Stewart. Stewart's teachings would have maintained the autonomous execution model while ensuring the integrity of the communication (p. 768 paragraph 1 of col. 1 of the page).

17. As per claim 15, the AAPA teaches simulation is performed by execution of a control system simulation model, the simulation model including a plurality of sub-models being performed on one of the plurality of modules respectively (p. 2 lines 16-21).
18. As per claim 16, the AAPA does not teach at least some of the modules are dynamically reconfigurable for communication via distinct memory locations.

However, Stewart teaches this limitation (p. 766 paragraph 4 of col. 2 of this page).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cuong V. Luu whose telephone number is 571-272-8572. The examiner can normally be reached on Monday-Friday 8:30am-5:00pm.

Art Unit: 2128

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah, can be reached on 571-272-2279. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. An inquiry of a general nature or relating to the status of this application should be directed to the TC2100 Group receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**/Cuong V Luu/**

**Examiner, Art Unit 2128**

**/Kamini S Shah/**

**Supervisory Patent Examiner, Art Unit 2128**